

Abstract Submitted
for the 4CF07 Meeting of
The American Physical Society

Photocurrent Measurements on Novel Group IV Semiconductor Alloys JAY MATHEWS, Dept. of Physics, Arizona State University, RADEK ROUCKA, SHUI-QING YU, JOHN TOLLE, JOHN KOUVETAKIS, JOSE MENENDEZ, Arizona State University — A system was developed for measuring photocurrent as a function of incident power and wavelength in new $\text{Ge}_{1-y}\text{Sn}_y$ semiconductor alloys. Detectors based on this material are expected to operate at wavelengths longer than possible in Ge-detectors due to the lowering of the band gap induced by Sn. Photocurrent measurements were taken on several alloys with incident light at $1.55 \mu\text{m}$ for a large range of intensities. Additionally, the absorption coefficient of these samples was determined as a function of wavelength.

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Date submitted: 14 Sep 2007

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